



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/506,405 | 09/01/2004 | Albrecht Kraus | DE 020055 | 3399 |

24737 7590 10/18/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

| |
|----------|
| EXAMINER |
|----------|

WALFORD, NATALIE K

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2879

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/506,405

Applicant(s)

KRAUS ET AL.

Examiner

Natalie K. Walford

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The Amendment, filed on August 3, 2006, has been entered and acknowledged by the Examiner. Newly added claims 11-13 has been entered. Claims 1-13 are pending in the instant application.

Claim Objections

Claim 2 is objected to because of the following informalities:

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 2 recites the broad recitation "a thickness below 100 μm , and the claim also recites below 50 μm and 20 μm , which is the narrower statement of the range/limitation. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Harding (US 6,185,277).

Regarding claim 1, Harding discloses a light source in figure 1 comprising a discharge vessel (item 1) which is filled with a filling gas, and with an electron beam source (area around item 4) arranged in vacuum or in a region of low pressure (column 1, lines 51-55), which source generates electrons (item 4) and propels them through an inlet foil (item 2) into the discharge vessel, characterized in that the inlet foil comprises a diamond layer (column 3, lines 50-52).

Regarding claim 2, Harding discloses a light source as claimed in claim 1, characterized in that the diamond layer has a thickness below 100 μm , in particular below 50 μm , advantageously below 20 μm (column 3, lines 65-66).

Regarding claim 3, Harding discloses a light source as claimed in claim 1, characterized in that the diamond layer has a frame (FIG. 2, item 51).

Regarding claim 4, Harding discloses a light source as claimed in claim 1, characterized in that the diamond layer has a metal brazing layer (FIG. 2, item 51).

Regarding claim 5, Harding discloses a light source as claimed in claim 1, characterized in that the diamond layer has an organic adhesion layer (FIG. 2, item 51).

Regarding claim 6, Harding discloses a light source as claimed in claim 1, characterized in that the electron beam source comprises a thermionic electron emitter (FIG. 1, item 3).

Regarding claim 7, Harding discloses a light source as claimed in claim 1, characterized in that the electron beam source comprises a field emitter (FIG. 1, item 3).

Regarding claim 8, Harding discloses a method of manufacturing a foil (item 2) for a light source in figures 1 and 2, characterized by the following process steps: carbon atoms (column 3, lines 65-67) are deposited on a substrate (item 22) so as to form a diamond foil (item 2 and column 3, lines 50-52), and a portion (item 21) of the substrate is etched away such that a remaining portion of the substrate forms a frame (item 51) for the diamond foil (column 4, lines 1-9).

Regarding claim 9, Harding discloses a method of manufacturing a foil (item 2) for a light source in figures 1 and 2, characterized by the following process steps: carbon atoms (column 3, lines 65-67) are deposited on a substrate (item 22) so as to form a diamond foil (item 2 and column 3, lines 50-52), the diamond foil is removed from the substrate (column 4, lines 1-9), and the diamond foil is brazed to a frame (item 51).

Regarding claim 10, Harding discloses a method of manufacturing a foil (item 2) for a light source in figures 1 and 2, characterized by the following process steps: carbon atoms (column 3, lines 65-67) are deposited on a substrate (item 22) so as to form a diamond foil (item 2 and column 3, lines 50-52), the diamond foil is removed from the substrate (column 4, lines 1-9), and the diamond foil is adhered to a frame (item 51).

Regarding claim 11, Harding discloses a gas discharge lamp comprising a discharge vessel (item 1) in figure 1, which is filled with a filling gas, which vessel is adapted to produce

Art Unit: 2879

non-coherent visible light from at least one wall in response to received radiation produced by the gas; an inlet foil comprising a diamond layer (item 2 and column 3, lines 50-52); an electron beam source (area around item 4) arranged in vacuum or in a region of low pressure (column 1, lines 51-55), which source generates electrons (item 4) and propels them through the inlet foil into the discharge vessel, causing the gas to produce the radiation (see FIG. 1). The Examiner notes that the recitation that “a gas discharge lamp” has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. Also, the Examiner notes that it has been held that the recitation than an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

Regarding claim 12, Harding discloses a method of manufacturing a light source in figures 1 and 2, comprising, not necessarily in the following order, providing a discharge vessel (item 1) which is filled with a filling gas, which vessel is adapted to produce non-coherent visible light from at least one wall in response to received radiation produced by the gas, an electron beam source (area surrounding item 4) arranged in vacuum or in a region of low pressure (column 1, lines 51-55), which source generates electrons (item 4) and propels them into the discharge vessel, causing the gas to produce the radiation; inserting an inlet foil (item 2) between the source and the vessel, which inlet foil comprises a diamond layer (column 3, lines 50-52). The Examiner notes that it has been held that the recitation than an element is “adapted

Art Unit: 2879

to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harding (US 6,185,277).

Regarding claim 13, Harding discloses the method of claim 12, but does not expressly disclose that the light source is a gas discharge lamp, as claimed by Applicant. Harding is cited to show the vessel is a tube envelope that is sealed in a vacuum tight manner. It is known in the art that gas discharge lamps are sealed in the same manner. Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Harding’s invention to have the light source be a gas discharge lamp, since it is known in the art that a gas discharge lamp is a tube sealed in a vacuum tight manner, the same as Harding’s invention.

Response to Arguments

Applicant’s arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on August 7, 2006 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie K. Walford whose telephone number is (571)-272-6012. The examiner can normally be reached on Monday-Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

nkW

N. Ali Wazir
10/12/06

Nimesh Kumar D. Patel
NIMESHKUMAR D. PATEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800